Navy/Marine Corps Intranet (NMCI)

CAPT Bill Bry
PEO-IT Navy Programs Manager
3 November, 1999

Procurement Sensitivity

NMCI is nearing the Request for Proposal (RFP) release date. Some information is competition sensitive. We regret that we may be unable to answer some of your questions regarding this procurement.

NMCI Briefing Outline

- What is it?
- Why do we want to do it? Why now?
- What will it look and feel like?
- How will we do it?
- How will we specify our requirements?
- When will it happen?
- How much will it cost?
- How much better will it be?
- How will we transition to it?
- What kind of logistic support do we get?

Navy/MarineCorps Intranet

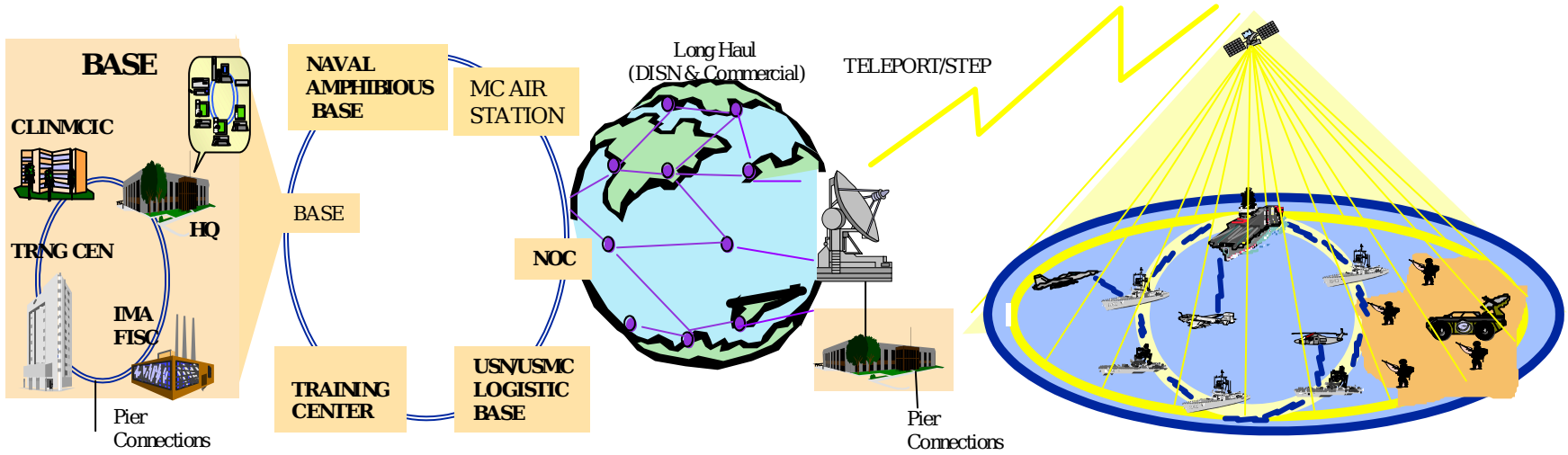
What is it?

What is NMCI?

Secure, seamless global end-to-end connectivity, supporting both war fighting and business functions. It will allow our people to focus on the mission, rather than IT services, and will enable new processes and technologies such as knowledge management, distance learning, telemedicine, etc. to improve the Quality of Life of all Service members and employees.

NMCI will be an integral part of the DoD Global Information Grid (GIG)

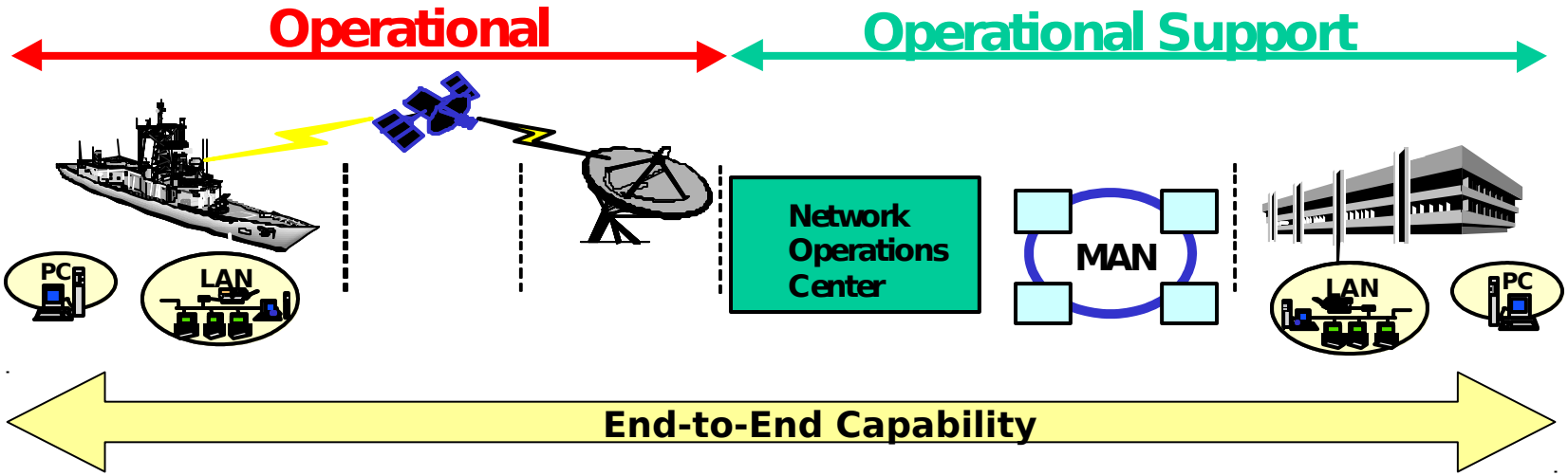
NMCI Notional Architecture



Base Area Network | **Metropolitan Area Network** | **Wide Area Network** | **Fleet Teleports** | **Deployed/Mobile Units**

- ***Department of the Navy global, secure, end-to-end capability***
- ***Current Navy Networks and Marine Corps Enterprise Network efforts will combine to make up the NMCI***

IT21 and NMCI Desktop-to-Desktop Information Service



IT21 is:

- **Shipboard LANs**
- **Ship to shore radio terminals**
- **Space segment (for SATCOM)**
- **Shore gateways**

NMCI is:

- **A Service**
- **All Navy and Marine Corps Networking involved**
- **Fleet Base/Local Area Networks to be provided**
- **Desk to Desk Management**
- **PCs & Enterprise-wide software**
- **Help Desks**
- **WANs / MANS**

NMCI Goals

- **Quickly and securely share knowledge around the globe**
- **Provide improved voice, video, and data services**
- **Eliminate interoperability problems**
- **Remove network impediments to improve productivity and speed of command**

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Why do we want to do it?

Why now?

Why do It?

Interoperable…Secure…Standardized

For National Defense

- Robust security
- Increased speed of command
- Interoperability with joint and coalition forces

For each Claimant

- Focus on core mission
- Streamlined budget & planning
- More cost effective
- More efficient processes across the DoN

For each Command

- Remote training
- Instant access to broad scope of information
- Standard look and feel
- Technology smart

DON Leadership says...

Chief of Naval Operations, Admiral Jay Johnson:

"Our dependence on information is absolute, and that will never change... **Interactive connectivity will be required at all levels... -- it will all be netted.**"

Former Commandant of the Marine Corps, General Charles Krulak:

"We must reach and execute effective military decisions faster than our adversaries... [through] **a command and control system that is both flexible and adaptable**."

Former CINCPACFLT, Admiral Archie Clemins:

"**Network warfare, robust infrastructure and information dissemination to dispersed forces** are key elements in achieving information superiority."

Why Now?

Secretary of Defense, Honorable William Cohen:

"The important and central role of C4ISR systems **requires a hard and sweeping look at our entire effort…"**

Joint Vision 2010:

"**The unqualified importance of information will not change in 2010**. What will differ is the increased access to information and improvements in the speed and accuracy… "

Chief of Naval Operations Admiral Jay L. Johnson:

Operational primacy…requires the robust linkage of our ships to all of their supporting elements ashore to provide the speed, accuracy and depth of support. Over the past couple of years we have asked ourselves can we afford to do this?… Better we make the statement: ***We cannot afford not to do this."***

Why Now?

- **Dependency upon IT**
  - Revolution in Military Affairs (RMA)
  - Revolution in Business Affairs (RBA)
- **Increased security risks**
- **Rapid technology cycles**
- **Focus $$ and people on core businesses**

Why now?

Will merge MCEN and Navy networks to provide:

- **Enhanced security**
- **A coherent DoN-wide network - merge with DoD**
- **Increased efficiencies - need payback.**
- **Enhanced business and warfighting processes - merge with IT-21**
- **More cost effective IT investment**

Timing is optimum to combine Navy/Marine Corps IT resources into a single integrated intranet capability

What will it look and feel like?

NMCI Expectations

- Full range of IT services (V,V,D) on a single, robust infrastructure
- Ready access to information when and where required
- Flexible and scalable to support emerging concepts and real world operations
- Seamless extension from garrison to deployed/ shipboard environment
- Interoperability with legacy and emerging Joint/Naval AISs
- Functionally tailored to support DoN business processes and mission of the warfighter
- Both sensitive/unclassified and secure (secret high)
- Standards based (JTA, GNIE, ITSG)
- Integral part of the Global Information Grid (GIG)

NMCI Services

Data seats

Web hosting

Legacy Systems hosting

Data warehousing

Voice seats & Options

- Fixed voice (POTS)
- Secure voice (STE)
- Cellular phone
- Personal pager

Video seats & Options

- Fixed VTC sites
- Movable VTC sites

NMCI Data Seat Services

Data Seat Types

Fixed WS

Laptop

Embarkable WS

Embarkable Portable

Standard Services

- STD office automation software
- E-mail services
- Directory services
- File share services
- Web access services
- Newsgroup services
- Multimedia capabilities
- Print services
- Scan services
- Facsimile services
- NMCI access
- NIPRNET access
- Internet access
- Mainframe access
- Desktop access to legacy apps.
- User training

High End *(includes Standard Services)*

- High bandwidth
- CPU intensive processing

Mission Critical *(includes Standard Services)*

- High availability
- Greater level of real-time operations

Hybrid Seat

- ISP-like service
- No hardware provided Reservists
- Security access to SIPRNET
- Standard software suite
- Requested by and others requiring

Secure Upgrade Package

Data Seat Options

- Secure Remote Access Server (RAS)
- Organizational Messaging
- Collaborative services/planning
- Workflow management
- Computer managed instruction
- VTC
- Industry partner access
- Optional end

Hardware and Performance

Security

Applications and Productivity

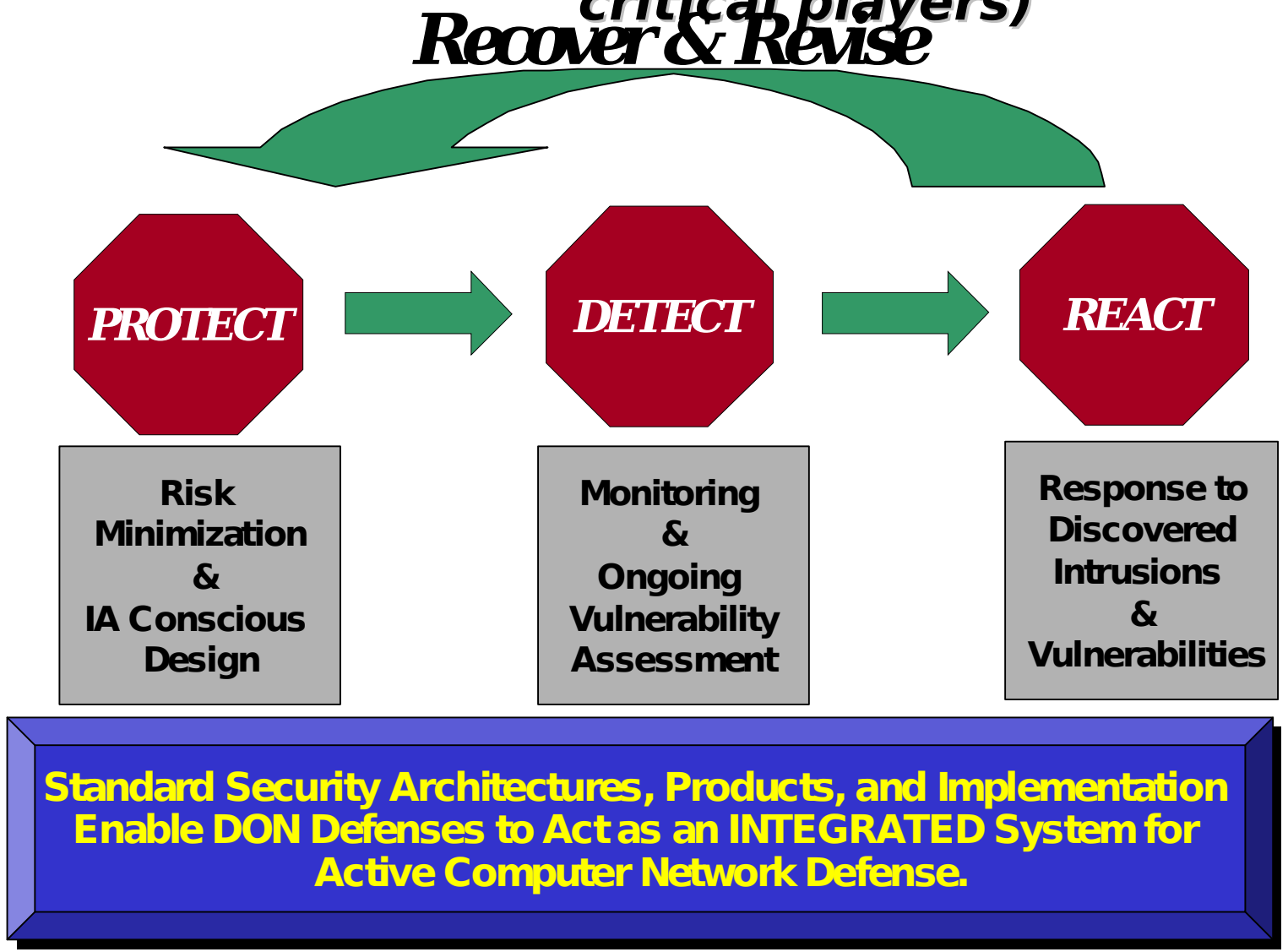
NMCI Security Specifics

- **NMCI will implement information security mechanisms to minimize risk to an acceptable level while having a sufficiently flexible architecture to respond to evolving external and internal threats**
- **Information security mechanisms include:**
  - Boundary protection
  - Containment mechanisms internal to NMCI
  - Public key enabled services; DoD PKI
  - Coordinated active computer network defense
- **Applied at every layer, physical through application**

With Performance Incentives

Active Computer Network Defense:

(Both developers and operators are critical players)


Recover & Revise
PROTECT
DETECT
REACT
Risk Minimization & IA Conscious Design
Monitoring & Ongoing Vulnerability Assessment
Response to Discovered Intrusions & Vulnerabilities
Standard Security Architectures, Products, and Implementation Enable DON Defenses to Act as an INTEGRATED System for Active Computer Network Defense.

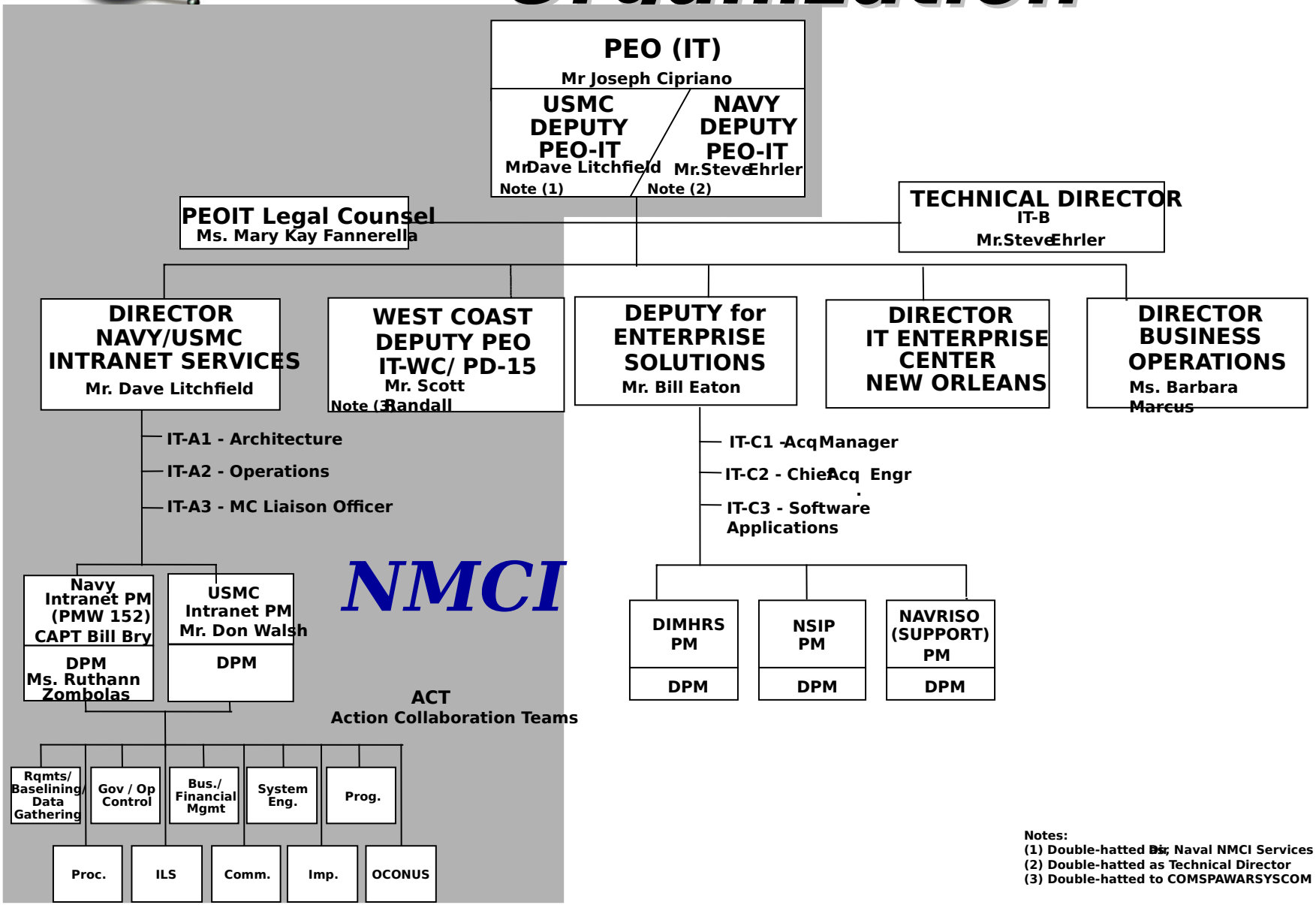
How will we do it?

The Approach

- **Navy/Marine Corps partnership**
- **Claimant participation - user satisfaction**
- **DoN-wide contracting effort**
  - Collaborative tools
- **Massive industry involvement**
- **Approval by OSD prior to award**

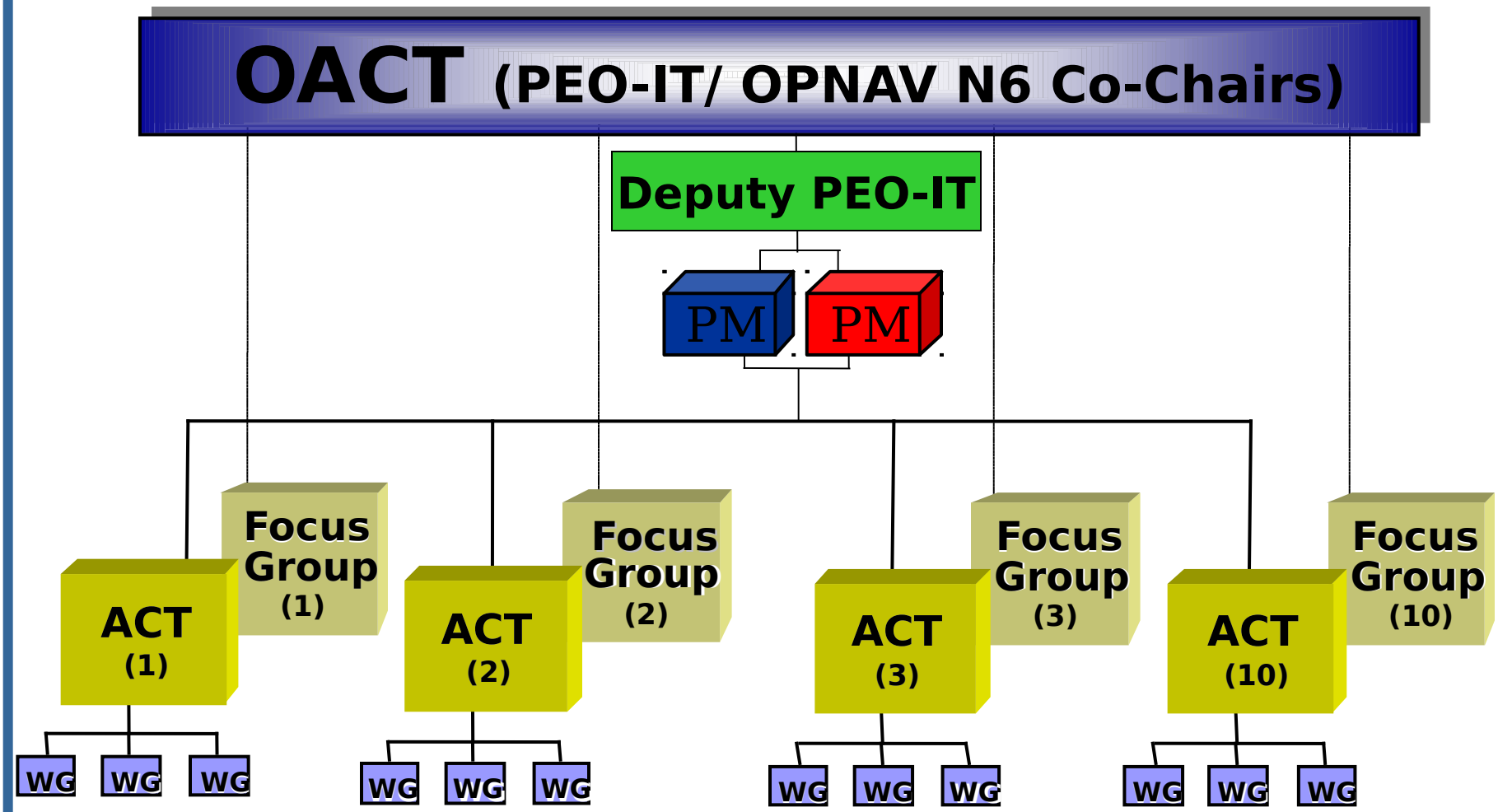
Buying a service end-to-end

Draft PEO-IT Organization



Notes:
(1) Double-hatted as Dir, Naval NMCI Services
(2) Double-hatted as Technical Director
(3) Double-hatted to COMSPAWARSYSCOM

NMCI Functional Management Structure



Action Collaboration Teams

- Requirements and Baseline
- Systems Engineering
- Implementation
- Operational Control/Governance
- Integrated Logistics Support
- Communications
- Business/Financial Management
- Procurement
- Programmatics
- OCONUS

Extensive Industry Participation

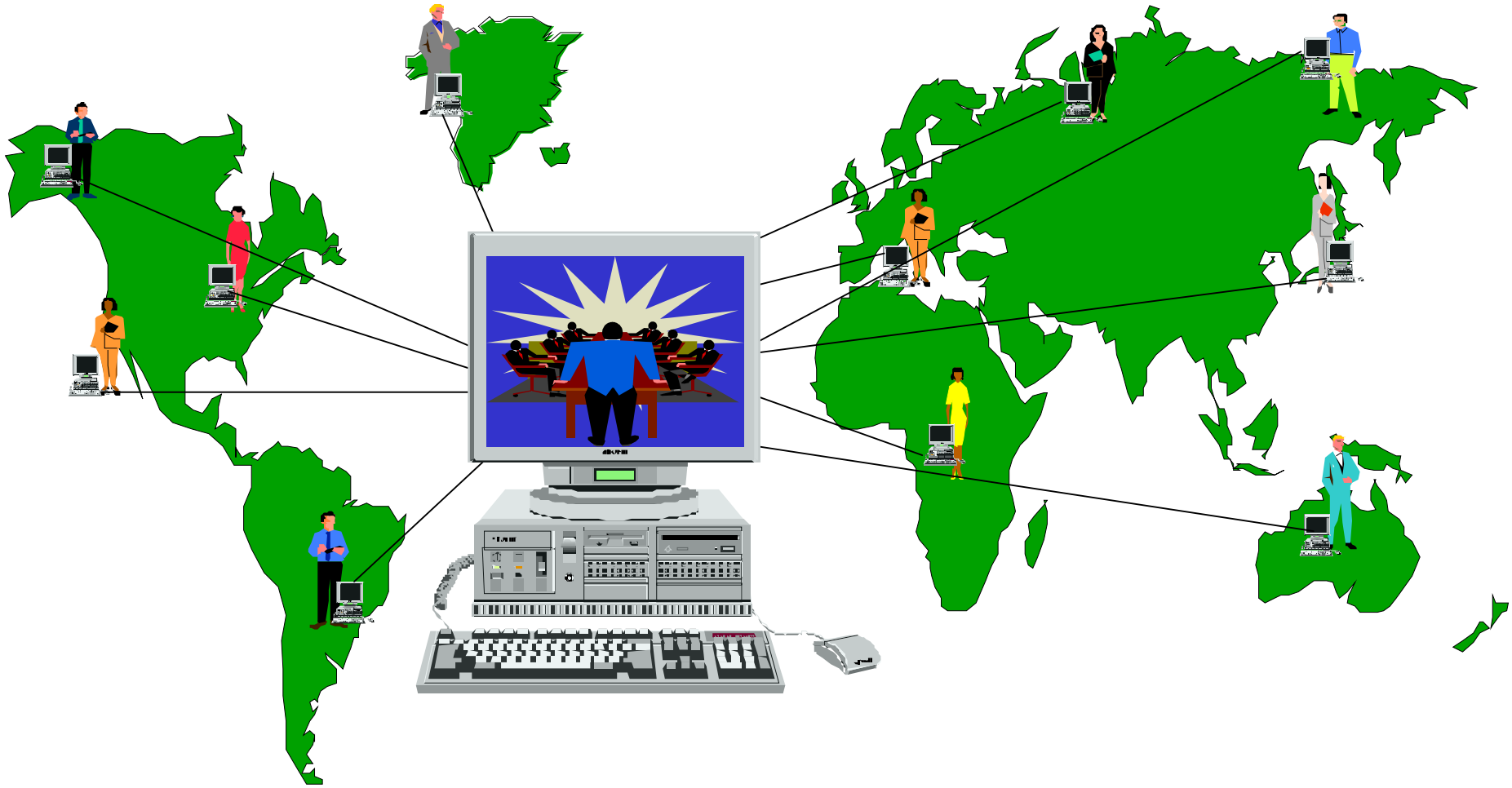
- **Industry Day**
- **Concept papers**
- **RFI**
- **Visits and demos**
- **Trusted agents serving directly on ACTs and Focus Groups**
  - Booz Allen & Hamilton
  - Gartner Group
  - KPMG
  - SAIC

Industry Visits

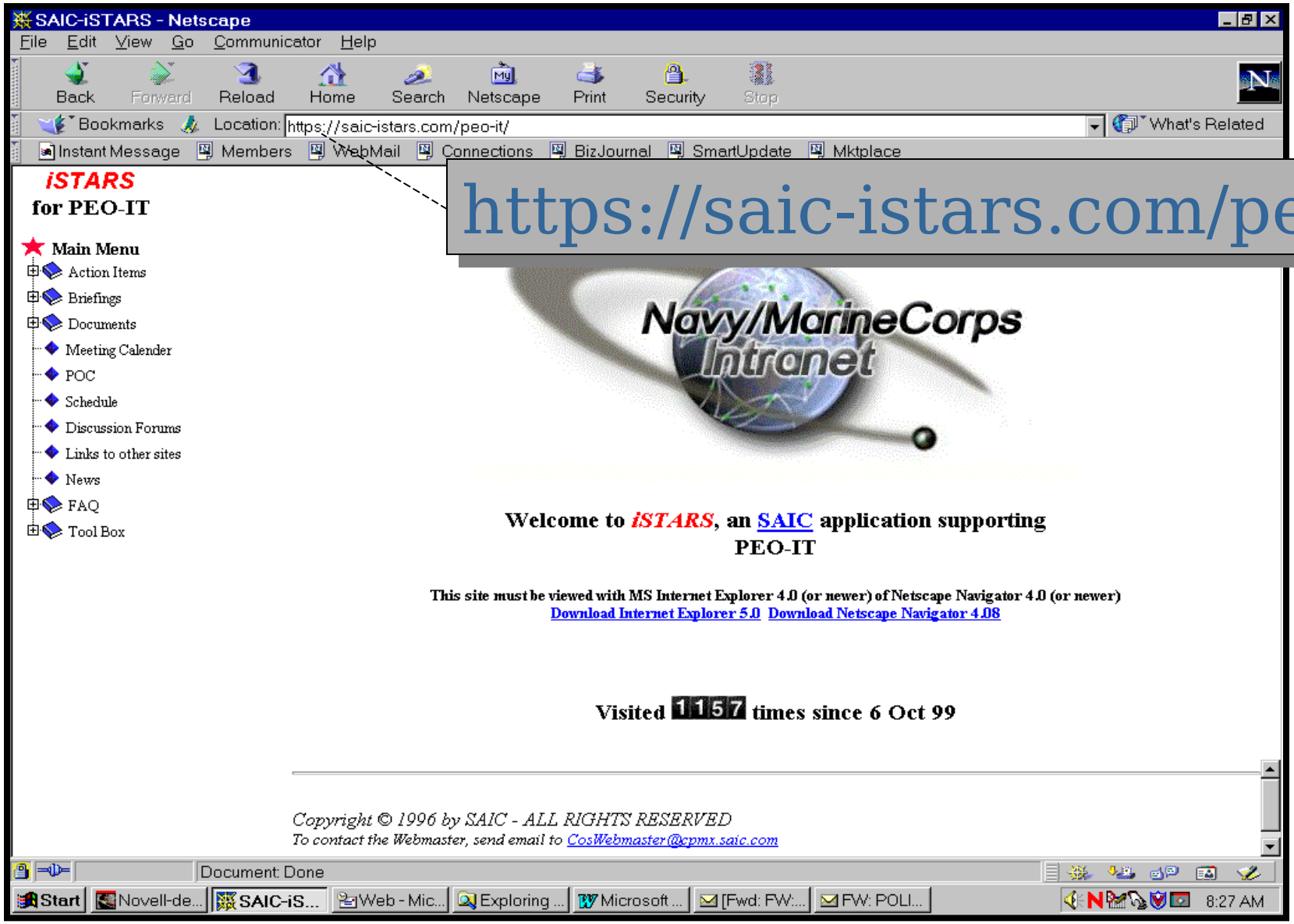
On 30 August, the PEO released a message asking Industry to extend invitations for Global Data Processing Center Visits. Below are the invites to date (completed visits are checked):

- [x] **Wang, Houston TX, 6 October**
- [x] **Dell, Austin TX, 6 October**
- [x] **ACS-GSG, Dallas TX, 7 October**
- [x] **IBM, Armonk NY, 22 October**
- [x] **CSC, Newark DE, 26 October**
- [x] **Lockheed Martin, 27 October**
- [ ] **AT&T, Plano TX**
- [ ] **EDS, Raleigh NC**
- [ ]
- [ ]

Collaborative Tool



iSTARS


SAIC-iSTARS - Netscape
File Edit View Go Communicator Help
Back Forward Reload Home Search Netscape Print Security Stop
Bookmarks Location: https://saic-istars.com/peo-it/
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Instant Message Members WebMail Connections BizJournal SmartUpdate Mktplace
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iSTARS
for PEO-IT
Main Menu
Action Items
Briefings
Documents
Meeting Calender
POC
Schedule
Discussion Forums
Links to other sites
News
FAQ
Tool Box
Navy/MarineCorps Intranet
Welcome to iSTARS, an SAIC application supporting PEO-IT
This site must be viewed with MS Internet Explorer 4.0 (or newer) of Netscape Navigator 4.0 (or newer)
Download Internet Explorer 5.0 Download Netscape Navigator 4.08
Visited 1157 times since 6 Oct 99
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To contact the Webmaster, send email to CosWebmaster@cpmx.saic.com
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Acquisition Strategy for NMCI Services

- **Full & open competition**
- **Competitive range determination based on oral proposals prior to due diligence phase**
- **Best value determination**
- **Incentivize security, customer satisfaction, small business participation, and absorption of Legacy systems**

Request for Information

- **Statement of Objectives**
  - Identify sufficient information to elicit industry comments
  - Services packaging
  - NMCI goals and operating environment
  - Government/contractor roles and responsibilities
  - Information assurance requirements
  - Sea/shore rotation requirements
  - Measurements for contractor incentive
  - Integration and testing goals
  - Technology infusion and refreshments goals
- **Design Reference Mission**
- **Released 30 Sep 99**
  - NAVSEA Contracts page: http://contracts.hq.navsea.navy.mil/nmci
- **Responses received 29 Oct 99**

N

Industry Comments

- **Received feedback from 26 companies**
- **No major changes to the course of action**
  - Refinements of Service Level Agreements
- **We can make the milestones to award and implementation**

Conclusion: No brick walls - We can get there fro

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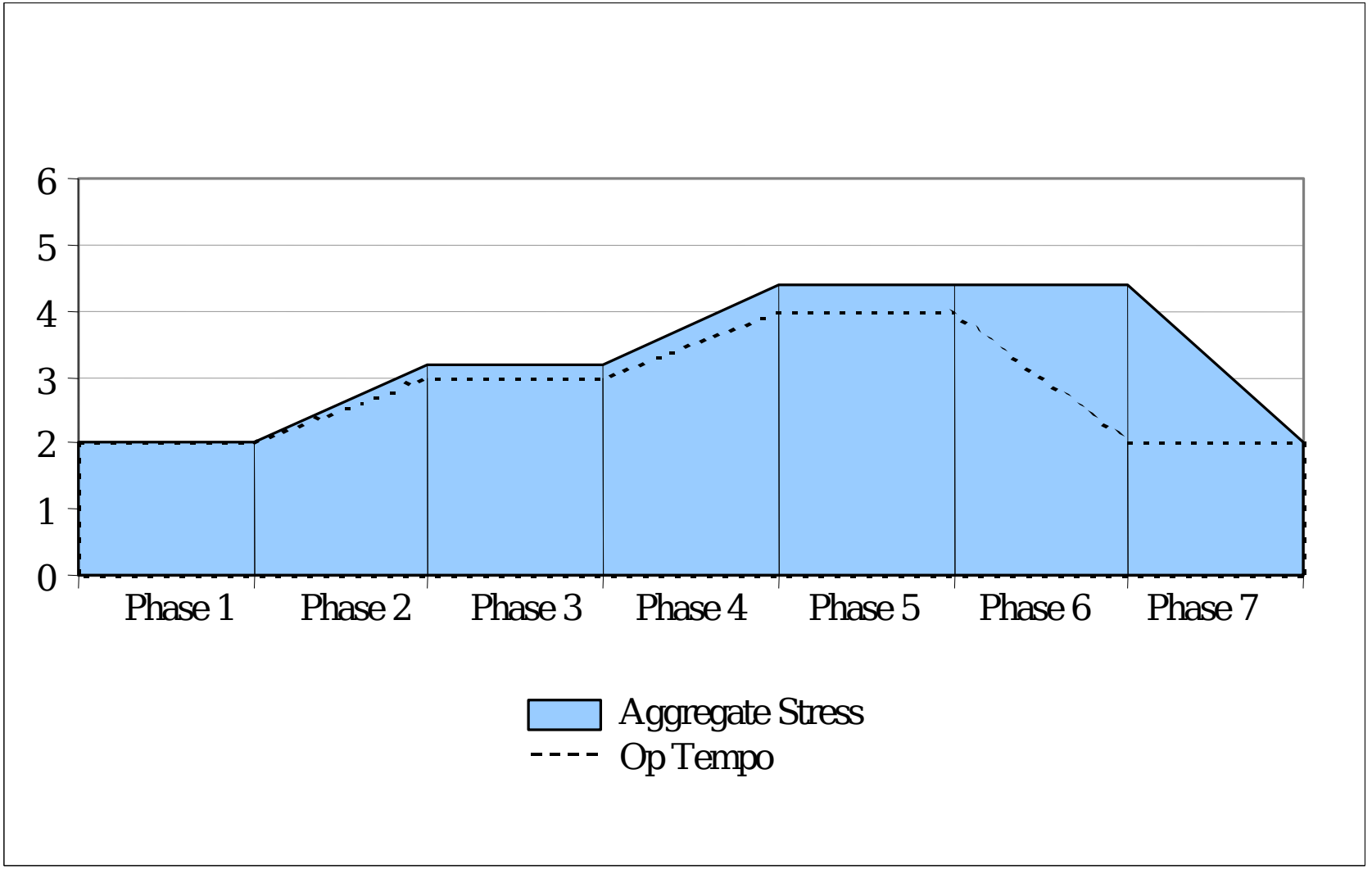
How will we specify requirements?

Design Reference Mission (DRM)

What is A DRM?

- **An engineering design tool that identifies representative environmental and operational stresses in which NMCI will operate**
- **It describes time phased scenarios and Measures of Effectiveness (MOE's) which correlate Informational Exchange (IX) of Naval enterprise functions to NMCI services**

Operational/Functional Stress Representation

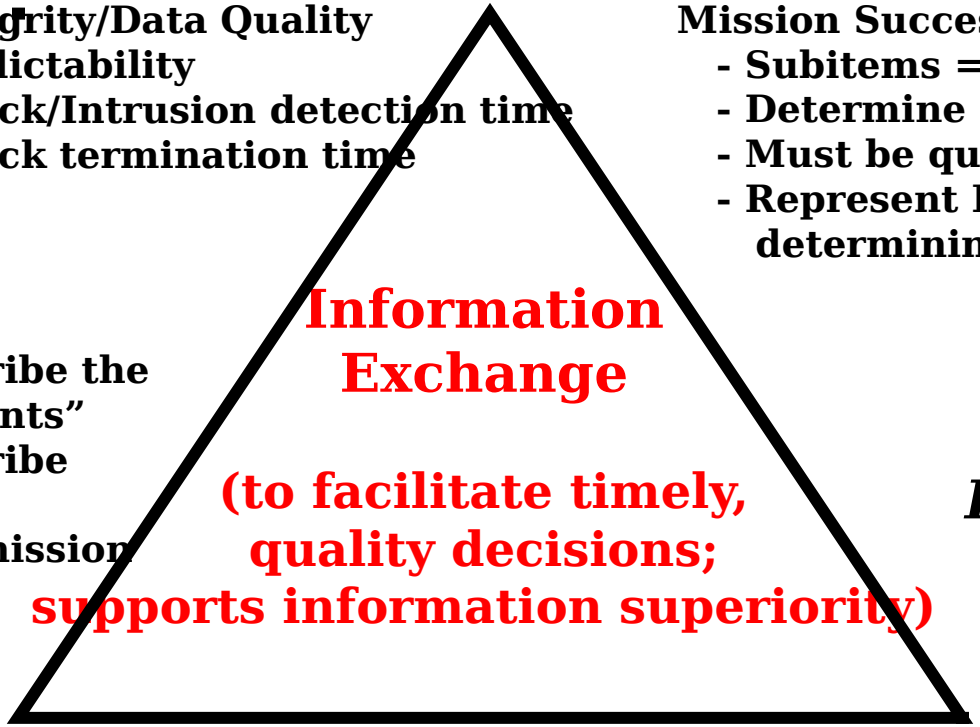


NMCI Design Space

Assurance

- Availability (Ao = Ai over time)
- Restricted access/Confidentiality
- Integrity/Data Quality
- Predictability
- Attack/Intrusion detection time
- Attack termination time

Mission Success Factors are independ
- Subitems = critical design parame
- Determine MOE(s) for every subit
- Must be quantifiable in engineerin
- Represent Evaluation Factors for determining "relative goodness"



DRM = Mission(s) description
- Scenarios describe the "use environments"
- Scenarios describe stresses
- Probability of mission success = P_A x P_B x P_C

Capacity

- Ubiquity of Access
- Connectivity
- Redundancy/diversity (Ai = inherent availability)
- Compute capacity
- Committed information rate/peak information rate
- Growth potential/scalability

Response Time

- Latency
- Throughput
- Training
- Interoperability
- Customer service
- Adaptability to stres
- Restoration time
- Time to increase/enl capability
- Technical refresh ra

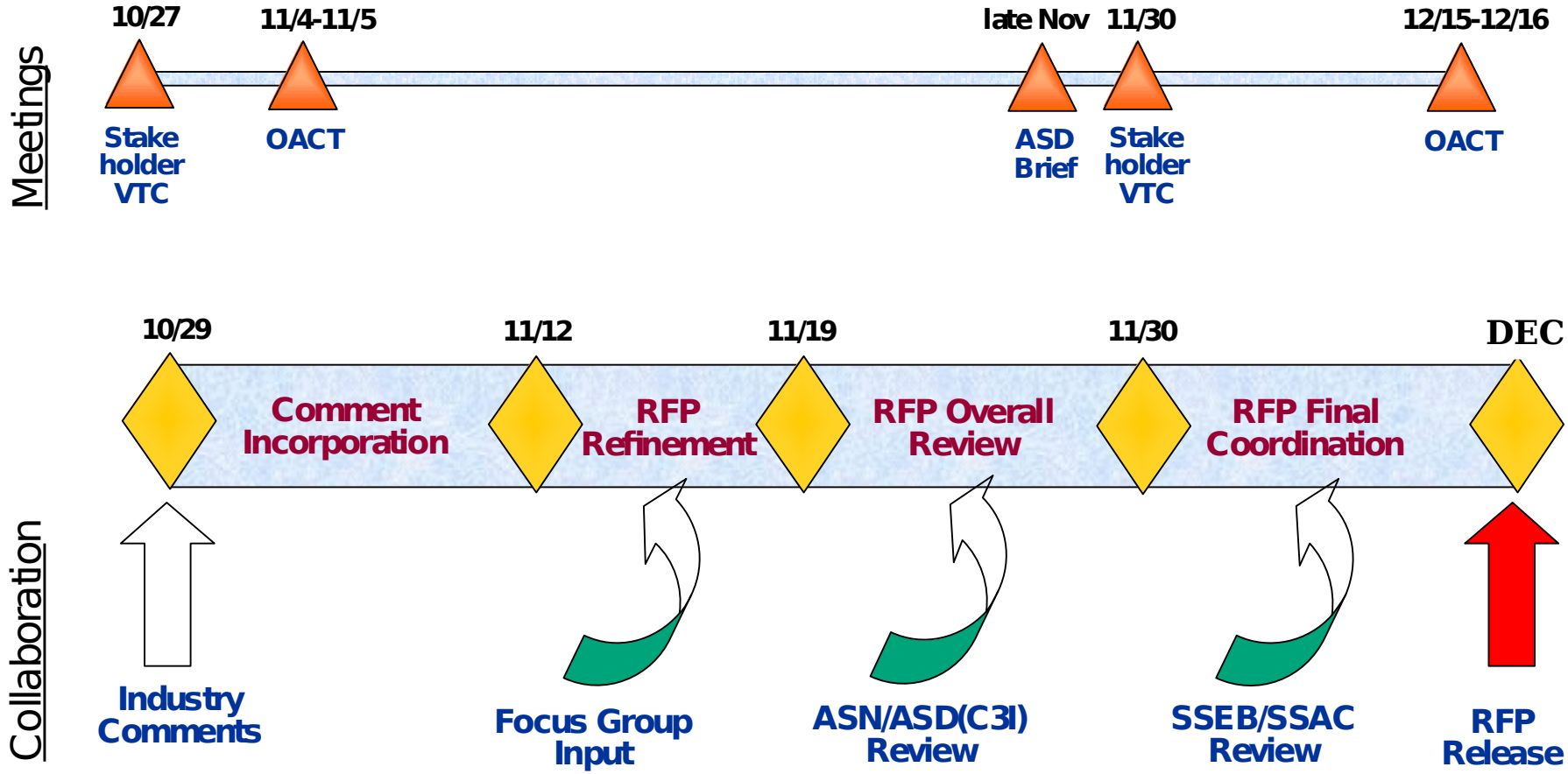
MOE Matrix

TIER 1	TIER 2	TIER 3
ASSURANCE (System available to authorized users when needed)	**Availability** **Survivability** **Integrity**	• Instantaneous, average, & overall availability • Physical survivability, intrusion detection & blocking • Configuration & data integrity
CAPACITY (Adequate resources for current needs and new near-term needs)	**Utilization** **Latency** **Scalability**	• Proportion of throughput, processing, & storage utilized • Network & application delays • Interoperability, reconfigurability, & geographic expandability
RESPONSIVENESS (Help provided, problems resolved, repairs & updates made in a timely manner)	**Customer service & support** **Network services** **Training & sea/shore rotation**	• Customer service, help desk support, & technology insertion • Recovery time, availability lost, & security incident reporting • Scope & effectiveness

Peak & off-peak; net, subnet, & community; phases & interoperability

When will it happen?

NMCI RFP Timeline



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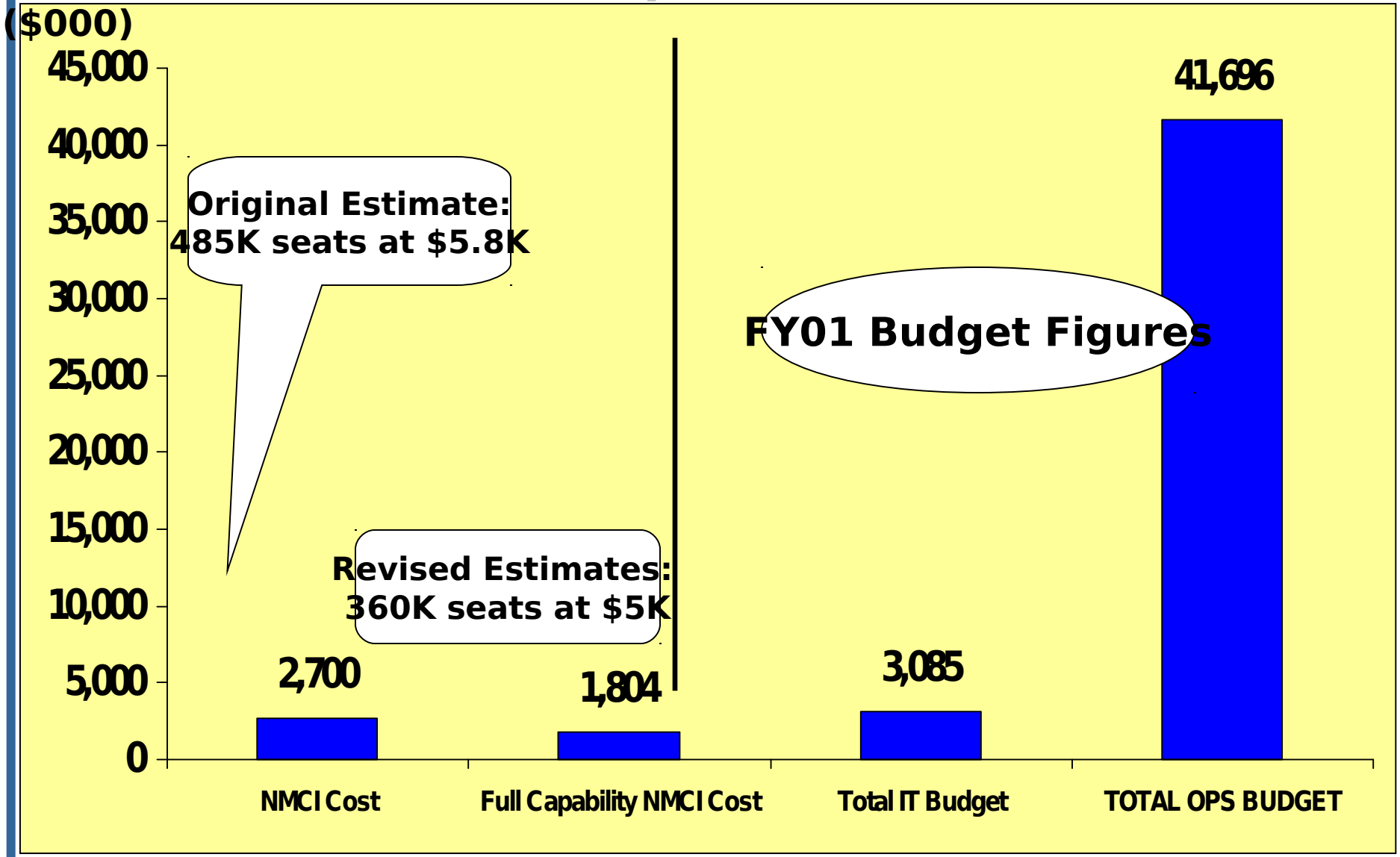
How much will it cost?

Annual Cost Context

Assumption is 360K seats



IT Cost Distribution

- **In Industry, IT costs range from 1% to 12% of gross revenue. Average 5%.**

Typical IT costs by function

Function	% of IT Budget
Personnel	37.75%
Hardware	23.25%
Software	15.70%
Overhead	6.00%
Communication	5.55%
Networking Products	5.25%
Outside Services	5.10%
Other	1.4%

Need to maintain balance among the functional cost elements to maximize benefit

Source: CMP Media Inc.

Estimated Costs

- **Cost in FY00-01 is determined by the number of seats Claimants commit to buy**
- **Basic service plus any optional services will determine the actual cost per seat for each individual claimant**

Estimated Cost Drivers

Help Desk	~$1800/Seat
Capital Amortization	~$800/Seat
Desktop Hardware/Software and Refresh	~$1000/Seat
Network Operation and Maintenance	~$500-1000/Seat

Total for all voice, video, and data to the desktop is estimated at $4000 - $5000 per seat

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How much better will it be?

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Business Case Analysis

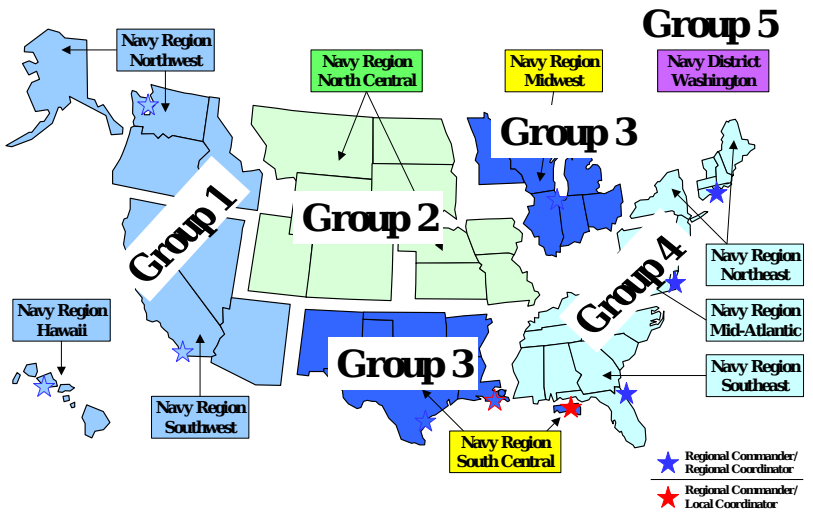
Objectives / Scope

Objectives

- **Demonstrate the technical and economic viability of NMCI**
- **Determine if an integrated end-to-end service from a single provider is best value - evaluate cost and performance**

Scope & Assumptions

- **Navy and Marine Corps non-tactical IT, voice and video included**
  - CONUS plus Hawaii view
  - Includes All 22 Navy Claimants + USMC
- **Ashore, one year snapshot**
- **Per seat cost includes:**
  - Desktops, laptops
  - Desktop voice assets, software
  - LAN/BAN, Wide area connectivity (voice and data)
  - Associated support services



Survey Approach & Schedule

COST ANALYSIS

As-Is

- Define current system architectures
- Collect, normalize, validate data
- Estimate cost per seat and performance correlation

DISN vs. Commercial

- Compare DISN vs. commercial cost, performance in architecture-based scenario

To-Be

- Define system architecture for Low, Medium, and High service levels
- Estimate seat cost for each scenario using existing cost models and industry benchmarks
- ValidaterResults
- Deliver final report

SCHEDULE

Stakeholder Meeting

- 1 day - late November
- Commanding and Action Officers of the selected sites

Site Surveys

- Approx. 20 survey sites chosen

Survey Teams

Contractor Staff
- **Booz-Allen & Hamilton**
- **Inc., Prime**
- **Gartner Group**

Navy Officer

Other Possible Participants
- **NCCA representative**
- **PEOIT representative**
- **N6 representative**

How will we transition to it?

NMCI Ambassadors

Four representatives, deploying November '99 to:

- **Share the NMCI vision with the Echelon II commands**
- **Resolve FY00 funding issues/marks**
- **Escalate Claimant concerns if necessary**
- **Act as customer advocates**
- **Assist in developing transition plans**
- **"Train the trainers" on implementation facilitation**

Transition to NMCI

- Several Commands have been identified to start transitioning in FY00

What kind of logistics support do we get?

NMCI Personnel

- **Military:** Provide Career Path Continuity to IT Personnel by including Sea/Shore Rotation in NMCI requirements
  - Matrixed Organization for IT Professionals, Provide Training, Improve Core Competencies

- **Civilian:** Legal staffs are currently working the issues

Integrated Logistics Support

- **Contractor Responsible for all Logistics**
  - Maintenance
  - User Training
  - Configuration Management
  - End to End Support

- **ILS Metrics**
  - Established MOEs for critical support functions:
    - A_0
    - Help Desk
    - Response time
    - Training

Summary

Summary

- A lot of “IT”
- A very short schedule
- A plan to get there

Navy/Marine Corps Intranet (NMCI)

CAPT Bill Bry
PEO-IT Navy Programs Manager
3 November, 1999